MODIS TECHNICAL TEAM MEETING

January 26, 1995

The MODIS Technical Team Meeting was chaired by Vince Salomonson. Present were Bruce Guenther, Chris Justice, David Herring, Bill Barnes, John Barker, Dorothy Hall, Wayne Esaias, Harry Montgomery, Ed Masuoka, Barbara Putney, Joann Harnden, Al Fleig, Yoram Kaufman, Rosemary Vail, Dick Weber, and Locke Stuart.

1.0 SCHEDULE OF EVENTS

Feb. 13-17	PDR for EOSDIS Science Data Processing System Segment
Feb. 20	MODIS Ocean Discipline Group Meeting, in Miami, FL
Feb. 27-28	EOSDIS PDR Wrap-up of all Segments
Feb. 27-28	SWAMP Meeting
Feb. 21 - 24	Workshop on international Calibration/Validation Efforts for EOS Ocean Color Sensors, in Miami, FL
May 1 - 2	CEOS Meeting
May 2	MODIS Calibration Working Group (tentative)
May 3 - 5	MODIS Science Team Meeting (tentative)

2.0 MINUTES OF THE MEETING

2.1 MODIS Project Reports

Barnes reported that he visited SBRC last week and observed that the MODIS Engineering Model (EM) is up and running. He noted that there are no calibrators on the EM except the blackbody, and that there are some electronics problems. Also, SBRC is taking more time than they had planned to run the EM tests, but they are working day and night and weekends to stay within schedule.

Barnes stated that SBRC has just begun conducting the ghosting, spurious response, and cross talk tests all together as one test. It is not yet clear how they can perform tests to separately quantify each of these problems. However, Barnes pointed out, they are learning a lot as they go.

Barnes stated that the band-to-band alignments look good and that the instrument appears to be stable (although SBRC hasn't done vibration testing yet). Weber told the Team that the review of the EM test results will be held in March. The results will be presented to the Science Team in May.

2.1.1 Personnel Losses

Weber reported that SBRC's lead thermal engineer for the MODIS project, Paul Barkfeldt, is resigning. His presence will be missed. Wayne Pierre, an engineering analyst is also resigning.

2.2 SDST Reports

Masuoka reported that Mary James, of EOSDIS, is putting together a document which will provide an overview of each EOS standard data product, much as the *EOS Reference Handbook* does for each instrument.

2.2.1 Beta Delivery

Salomonson asked how the MODIS Team is doing on delivery of beta code. Masuoka responded that about 30 percent of the code has been received. He pointed out, however, that some team members are waiting for EOS to resolve the grid issue before they begin developing Level 3 code. For the Feb. 9 Technical Team Meeting, Salomonson asked Masuoka to bring a checklist of those team members that have submitted beta code. He reminded the Team that each member must submit beta code by June 1995.

Masuoka stated that SDST plans to begin testing the beta code in June, so by that time SDST should have finished integrating the Level 2 algorithms delivered by the team. He noted that Level 3 code may lag the Level 2 by a few months because a Level 3 grid needs to be selected for the AM instruments and binning/compositing approaches for Level 3 need to be developed.

Fleig added that the simulation data SDST provides will test algorithm flow, not the science. Simulation data will be made available by the end of April 1995.

Continuing on the subject of Level 3 gridding, Masuoka stated that a proposal was sent from the EOS AM Project Scientist, Piers Sellers, suggesting that an ISSCP grid with 60km cells be used and smaller resolutions be nested underneath it in evenly divisible increments down to 1km as suggested by the CERES team. Bob Evans, on the other hand, suggested using a 1km ISSCP grid and aggregating up from 1km cells. Masuoka plans to try to get the differences in the two approaches between MODIS and CERES resolved before the upcoming SWAMP Meeting, where he hopes a single approach to gridding for all EOS AM instruments can be announced.

Later, Kaufman asked for a better definition of the beta delivery schedule and the gridding problem. He said he thought SDST only wants beta delivery of Levels 1 and 2 because the Science Team doesn't yet have a basis for writing Level 3. Masuoka responded that once you decide which grid to use, you can begin writing Level 3 code. He stated that if, for any reason, the grid issue cannot be resolved in a timely manner, then the Team will need to devise a strategy whereby they can still produce Level 3 code. Masuoka stated that EOS Project expects all Level 2 and 3 algorithms to be fully integrated by January 1996.

2.2.2 Data Assimilation Office

Salomonson told the Team that he recently attended a review of the EOS Data Assimilation Office (DAO), which is the data quality assurance component of

EOS. He noted that Ricky Rood, head of Data Assimilation Interdisciplinary investigation and the DAO, announced at that meeting that the MODIS Team is not ready to begin planning for its data assimilation. Salomonson feels that there is communication disconnect between the DAO investigation and the MODIS Science Team. The DAO has its own instrument team which is nominally to act as an interface with each of the EOS instrument teams. Salomonson observed, however, that it is likely that 75 percent of the MODIS Science Team has never even heard of the DAO. He asked MAST to invite Rood to attend the next MODIS Science Team Meeting and give a presentation on the DAO. He also pointed out that there is usually an article on the DAO in each issue of *The Earth Observer*, so the Team should look there for background information in the meantime.

2.3 MCST Reports

Guenther announced that MCST has submitted a MODIS calibration paper for peer review to the *Journal of Atmospheric and Oceanic Technology*.

He stated that some progress has been made on the calibration of the MODIS fire bands. The integration and alignment collimator has a 1,000K source, so MCST will perform the calibration of MODIS' high dynamic range bands using that source. Guenther noted that he has not yet seen the modeling results of the 1,000K source calibration.

2.4 MODLAND Reports

Justice told the Team that Skip Reber of the MTPE Office (Code 170) at Goddard, will be discussing test data at the SWAMP Meeting. Justice is concerned that DAO is working the same problem independently and from a different angle. Salomonson reiterated that communications must be established between those groups concerned with test data and assimilation.

Justice reported on his meeting in Boston on BRDF and Land Cover. MODLAND has decided to deliver a Land Cover science presentation at the next IWG, and a MODLAND outreach session on land science issues at the following IWG.

2.5 MAST Reports

Stuart announced that he is concerned about the increasingly high cost of holding the MODIS Science Team Meetings. He discussed a number of cost containment options.

A lively discussion of the "strawman" Agenda for the next Science Team Meeting ensued. Herring will iterate on it and present another draft at the next Technical Team Meeting. A final Agenda and logistics plans for the Meeting are forthcoming.

Herring announced that MAST is developing a Document Development and Distribution Plan for the MODIS Team. MAST is preparing a presentation of the plan for the Technical Team.

Herring announced that the MODIS Science Team Minutes from the October 1994 meeting are now available via Mosaic on the World Wide Web (WWW). The minutes are linked to the MODIS Home Page.

3.0 ACTION ITEMS

1. *Herring:* Invite Ricky Rood to attend the upcoming MODIS Science Team Meeting.
2. *Herring*: Present the final Agenda and Science Team Meeting logistics at the next Technical Team Meeting.
3. *Guenther:* Report the modeled results of the 1,000K source for SBRC's integration and alignment collimator to the Technical Team.

3.1 Action Items Carried Forward

4. *Weber*: Work with SBRC to obtain MODIS test data. [Test data are forthcoming from SBRC.]
5. *MODIS Team*: Determine how, given the MODIS bowtie effect, MODIS images will be produced at launch. [This may be a suitable topic for discussion at the next Science Team Meeting.]
6. *Fleig and Ungar*: Interact with the group leaders prior to developing a MODIS data simulation plan for review at the next Science Team Meeting. [Work on this item is still in progress.]

3.2 Closed Action Items

1. *Fleig:* obtain some AVHRR data gridded in the ISCCP grid and forward them to the MODIS Team Leader. [Dorothy Hall obtained the requested data.]

4.0 RECENT MODIS DOCUMENTS

Note: All recent MODIS documents are maintained in MODARCH. If you would like access to or information about MODARCH, please contact the MODARCH System Administrator, Michael Heney, at (301) 286-4044 or via e-mail at mheney@ltpmail.gsfc.nasa.gov.

1. Ocean Group's Productivity Algorithm Workshop Report, by MOCEAN.
2. Suggestions for Calibration Coefficient Generation, by Phil Slater and Stuart Biggar
3. The Earth Observing System, by Michael D. King, David D. Herring, and David J. Diner
4. MODIS Level 1B Calibration ATBD, by MCST
5. Lunar Viewing Opportunities from the MODIS Space Viewport, by Brij Gambhir and Jack Shumaker